Environmental Review of Upper West Transmission System Reinforcement Alternatives

This appendix provides high-level environmental information for the Upper West reinforcement alternatives to the plan preferred by WPSC. The data is taken from information gathered for the development of the Advance Plan 8 report (Wisconsin River Area Study, Technical Support Document D23r). Environmental information for the WPSC preferred plan, Tripoli-Highway 8, is contained in Appendix A.

The following reinforcement alternatives would have minimal additional environmental impacts due to the fact that any construction would take place in existing substations or along existing transmission system rights-of-way:

1.) D-SMES Plan.
This plan includes the addition of voltage support devices in existing substations and the reconstruction of existing transmission lines.

2.) Parallel Circuit Plan.
This plan proposes to replace existing single circuit lines (built with H-frame structures) with parallel single pole circuits. This method would minimize the acquisition of new right-of-way. The plan also proposes to convert an existing 46 kV transmission line and three substations to 115 kV operation.

Table E-1 provides a summary of the environmental impacts associated with the Black Brook—Venus 115 kV Plan or the Black Brook—Venus 345 kV Plan.

Table E-1: Environmental Impact Summary for the Black Brook—Venus 115 kV Plan or the Black Brook—Venus 345 kV Plan.

Environmental Factor	**Black Brook-Venus Plans**
General Description	345 kV or 115 kV construction.
Length	29 Miles
Study Area	261 Square Miles
Land Use	80%-Woodland 30%-Wetland 20%-Agricultural
Corridor Type	Existing Electric Transmission U.S. Highway 45
Public Lands	25%-Langlade County Forest
Sensitive Resources	Wolf River
Cultural Resources	Mecikalski Stove Wood Building (Pelican Lake), Patio Park Airport (Abandoned) Summit Lake Landing Strip

Sources: USGS 1:250,000 Topographic Map, Cultural Map of Wisconsin, Michigan Atlas and Gazetteer,

Wisconsin Atlas and Gazetteer, Airport Sites in Wisconsin 1992, and Major Public Open Space Map.

Table E-2 provides a summary of the environmental impacts associated with the Prentice-Highway 8 Plan. The summary includes all impacts between Ladysmith and Rhinelander.

Table E-2: Environmental Impact Summary for the Prentice—Highway 8 Plan.

Environmental Factor	**Prentice—Highway 8 Plan**
General Description	New 345 kV Line Operated at 115 kV
Length	73 Miles
Study Area	1606 Square Miles
Land Use	90%-Woodland 40%-Wetland 10%-Agricultural
Corridor Type	U.S. Highway 8 Railroad
Public Lands	5%-Chequamegon National Forest 5%-Northern Highland State Forest 5%-Flambeau River State Forest 5%-Lincoln County Forest 5%-Oneida County Forest 10%-Price County Forest 5%-Rusk County Forest 5%-Sawyer County Forest
Sensitive Resources	Elk River, Flambeau River, Jump River, Little Jump River, Little Rice River, Little Thornapple River, Somo River, Spirit River, Thornapple River, Thunder River, Willow River, Wisconsin River, Willow Reservoir, Kimberly Clark Wildlife Area, Spring Creek Wildlife Area, Cranberry Lake Fishery Area
Cultural Resources	Bearskin State Trail (Oneida County), Czechoslovakian Community (Phillips), Hiawatha Trail (Lincoln County), Phillips Fire Marker (Phillips), Pine Line Recreation Trail (Prentice), Timms Hill (Price County), Wisconsin Concrete Park (Phillips), Diderrich Ranch Airport (Hawkins), Drott Airport (Abandoned), Forest Protection Airport (Abandoned), Lonely Pines Airport (Kennan) Mohawk for Boys Airport (Abandoned), Oneida County Airport (Rhinelander), Pine Grove Airport (Rhinelander), Pinewood Airpark (Hazelhurst), Prentice Airport (Prentice), Price County Airport (Phillips), St. Mary's Hospital Airport (Rhinelander), Tomahawk Regional Airport (Tomahawk), Wisconsin River SPB Airport (Tomahawk)

Sources: USGS 1:250,000 Topographic Map, Cultural Map of Wisconsin, Michigan Atlas and Gazetteer, Wisconsin Atlas and Gazetteer, Airport Sites in Wisconsin 1992, and Major Public Open Space Map.